## REMARKS

Claims 1-40 remain in the case. Reconsideration is requested in light of the above amendments and the following comments.

Support for the Amendments

Support for the recitations in Claim 1 specifying at least 95 wt% of the hydantoin component and up to 5 wt% of at least one biocidally-inactive ingredient appears for example at page 8, line 24 to page 9, line 1. The recitation in Claim 1 regarding the biocidally-inactive ingredient(s) being one or more binders, fillers, excipients, dyes or colorants, stabilizers, perfumes, and/or manufacturing by-products is found for example at page 13, lines 10-12. Page 9, lines 1-6 provides support for the recitations in Claim 1 regarding the label indicating that the product can be used as a biocide in the aqueous medium of at least one member of the group consisting of wastewater, recirculating cooling water systems, once-through cooling water systems, brewery pasteurizers, pulp and paper mill systems, air washer systems, air and gas scrubber systems, and decorative fountains, and providing recommended dosage rates for use of the product appear for example at page 9, lines 2-6 and page 7, lines 18-19. The recitations concerning (a) the molar quantity of the 1,3-dibromo-5,5-dialkylhydantoin introduced into the aqueous medium being less than the molar quantity of N,N′-bromochloro-5,5-dimethylhydantoin that would be required to effect the same degree of microbiological control in said water, (b) the quantity of the 1,3-dibromo-5,5-dialkylhydantoin introduced into the water releasing an amount of "free chlorine" that is greater than the amount of "free chlorine" that would be released in said water by an equimolar quantity of N,N′-bromochloro-5,5-dimethylhydantoin, and (c) the amount of "free chlorine" released by the quantity of the 1,3-dibromo-5,5-dialkylhydantoin introduced into the water being greater than the amount of "free chlorine" that could be predicted to be released by that quantity of the 1,3-dibromo-5,5-dialkylhydantoin on the basis of the amount of "free chlorine" that would be released in the water by an equimolar quantity of N,N′-bromochloro-5,5-dimethylhydantoin is found for example at page 7, lines 17-28.

The amendment of Claim 2 as regards the compacted 1,3-dibromo-5,5-dialkylhydantoin being formed from 1,3-dibromo-5,5-dimethylhydantoin having an average particle size of at least 175 microns is supported for example at page 28, lines 13-25.

The recitation in Claim 4 concerning the compacted 1,3-dibromo-5,5-dimethylhydantoin being in the compacted form of granules, nuggets, pellets, tablets, briquettes, or pucks is supported for example at page 10, lines 13-15.

Page 8, line 21 to page 9, line 1, and page 26, lines 19-26 support the amendment of Claim 5 regarding the composition being at least 99 wt% 1,3-dibromo-5,5-dimethylhydantoin in the form of granules.

The recitations in Claim 6 as regards the composition being granules, nuggets, pellets, tablets, briquettes, and pucks, and at least one biocidally-inactive ingredient being a synthetic polyolefin-based hydrocarbon wax binder or a micronized synthetic polyfluorocarbon wax binder, or both are supported for example at page 10, lines 13-15 and page 13, lines 20-23.

Support for the recitations in Claim 26 specifying at least 95 wt% of the hydantoin component and up to 5 wt% of at least one biocidally-inactive ingredient appears for example at page 8, line 24 to page 9, line 1. Support for the biocidally-inactive ingredient being a binder, a filler, an excipient, a dye or colorant, a perfume, a stabilizer, and/or a manufacturing by-product as recited in Claim 26 appears for example at page 13, lines 10-12. The clarification that the water treating agent of (b) is other than a 1,3-dibromo-5,5-dialkylhydantoin is based for example on page 14, lines 20-24 and page 15, lines 1-16.

The Claim 40 amendment specifying the amount of biocidally-inactive ingredient being no more than 3 wt% of the 1,3-dibromo-5,5-dimethylhydantoin within said packaging material is supported for example at page 8, lines 3-10. The clarification in Claim 40 that the water treating agent of (b) is other than a

1,3-dibromo-5,5-dialkylhydantoin is based for example on page 14, lines 20-24 and page 15, lines 1-16.

Rejections Under 35 U.S.C. 112

The rejection of Claim 7 under the second paragraph of Section 112 has been remedied in the manner suggested by the Examiner. The EPA has been more fully identified in the first occurrence of Claim 7. This description appears in the specification, for example, at Page 10, line 13.

The rejection of Claims 1-4 under the first paragraph of Section 112 is inapplicable. In Claim 1 as originally presented "said biocidal composition" clearly referred back to "a biocidal composition contained within said packaging material". Thus the only reasonable interpretation of Claim 1 as originally presented is that the specified biocidal composition is contained within the packaging material. However, to avoid any possible misinterpretation, the claim has been amended so that the reader will know beyond a shadow of a doubt that the specified biocidal composition is contained within the packaging material. The makeup of the composition is given in the claim. The term "consisting essentially of" has a well-defined meaning in U.S. patent practice and no attempt has been made here to use the term in any unusual way. Thus what is in the package is clearly defined by the claim.

Rejections Under 35 U.S.C. 102(b)

The rejection of Claims 1-7, 11-17, 19-21, 23-25 under 35 USC 102(b) on Bottom et al. 4,597,941 ("Bottom") is untenable and should be reconsidered and withdrawn.

The governing authority in cases of this type is that "[i]f the examination at the initial stage does not produce a *prima facie* case of unpatentability, then without more the applicant is entitled to grant of the patent. *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). Anticipation requires the disclosure in a single prior art reference of each element of the claim under

consideration. *W.L. Gore & Associates v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984). And moreover, the disclosure of each such element must be arranged as in the claim. *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984). There must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention. *Scripps Clinic & Research Foundation v. Genentech Inc.*, 927 F.2d 1565, 18 USPQ2d 1001, 1010 (Fed. Cir. 1991).

Claims 1-7, 11-17, 19-21, 23-25 as amended recite elements which are not disclosed in, or even contemplated by, Bottom. For example, Bottom describes no label or sticker muchless the contents of such label or sticker, let alone the surprising beneficial results made possible in use by following the content of the label pursuant to the present invention. Such beneficial results are described in the specification and include the surprising results depicted in the drawings. Nor does Bottom describe a container in which at least 95 wt% of the biocidal composition in the container is a 1,3-dibromo-5,5-dialkylhydantoin with no more than 5 wt% of the biocidal composition in the container optionally or actually being one or more biocidally-inactive ingredients. Note blocks 38 and 58 of Bottom. Still additional features of the invention set forth in claims depending from Claim 1 which are not described in Bottom include for example a compacted form of 1,3-dibromo-5,5-dimethylhydantoin formed from 1,3-dibromo-5,5-dimethylhydantoin having an average particle size of at least 175 microns, the biocidal composition in the package being at least 99 wt% of 1,3-dibromo-5,5-dimethylhydantoin, and the presence of a synthetic polyolefin-based hydrocarbon wax binder or a micronized synthetic polyfluorocarbon wax binder as a biocidally-inactive ingredient of the biocidal composition. And, other distinguishing features that are set forth in other claims. Accordingly, no *prima facie* case of anticipation or even obviousness exists. Thus the rejection on Bottom is deemed untenable.

The Action seeks to accord no patentable weight to the presence of labels or stickers on the package, and therefore would ignore not only the presence of the labels or stickers on the package, but additionally, would ignore the contents of such labels and stickers and the significance of the contents of such labels and stickers. However, it is error to ignore or disregard any limitation in the claims. For example, as pointed out in *Ex parte Bonutti*, 2000 WL 33347628 (Bd. Pat. App & Intrf. 2000):

> [I]n applying the prior art, the examiner appears to have disregarded the cement bodies as recited in the claims, but such an approach is incorrect, for as stated in In re Glass, 472 F.2d 1388, 176 USPQ 489 (CCPA 1973), "[i]t is error to ignore specific limitations distinguishing over the references."

And *In re Angstadt et al.*, 537 F.2d 498, 190 USPQ 214 (CCPA 1976) puts the matter thusly:

> We note at the outset that the claim limitation "to form * * * hydroperoxides" must be given effect since we must give effect to all claim limitations. See In re Geerdes 491 F.2d 1260, 180 USPQ 789 (Cust. & Pat. App. 1974); In re Wilder, 429 F.2d 447, 57 CCPA 1314, 166 USPQ 545 (1970).

Claims 1-7, 11-13, 16-19, 25-33, and 36-40 were rejected under 35 U.S.C. §102(b) on White et al. 4,119,535 ("White"). This rejection is inapplicable to the present claims. White does not disclose any container or packaging material or label, let alone the surprising beneficial cooperation made possible between the contents of the label and the contents of the packaging material pursuant to the present invention as set forth in Claims 1-7, 11-13, 16-19 and 25. Moreover, White does not disclose or make possible a package containing either (1) a biocidal composition in which at least 95 wt% of the biocidal composition in the package is a 1,3-dibromo-5,5-dialkylhydantoin with no more than 5 wt% of the biocidal composition optionally or actually being one or more biocidally-inactive ingredients as in Claims 1-7, 11-13, 16-19 and 25, or (2) a package in which one component is at least 95 wt% of a 1,3-dibromo-5,5-dialkylhydantoin with no more than 5 wt% (or no more than 3 wt%) of that component optionally

actually being one or more biocidally-inactive ingredients, and the other component being a chemically different type of non-fluid biocidally-active water treating agent compatible with the 1,3-dibromo-5,5-dialkylhydantoin as in Claims 26-40. In fact, at Column 7 White specifies the presence of either 45.6 wt% of $NaHSO_4$ or 27.0 wt% of $Na_2CO_3$ with the DBDMH content being far less than 95 wt%, and thus teaches away from the present claims. And the White teachings involve separate treatments of the pool water with chlorine and after periodic analysis, addition of DBDMH and a large amount of $NaHSO_4$ or $Na_2CO_3$ in order for the reactions shown in Columns 5 and 6 to take place. Nor does White describe additional features of the invention set forth in claims depending from Claim 1, such as for example a compacted form of 1,3-dibromo-5,5-dimethylhydantoin formed from 1,3-dibromo-5,5-dimethylhydantoin having an average particle size of at least 175 microns, the biocidal composition in the package being at least 99 wt% of 1,3-dibromo-5,5-dimethylhydantoin, and the presence of a synthetic polyolefin-based hydrocarbon wax binder or a micronized synthetic polyfluorocarbon wax binder as a biocidally-inactive ingredient of the biocidal composition. Accordingly, reconsideration and withdrawal of this rejection is requested.

Here again the Action seeks to accord no patentable weight to the presence of labels or stickers on the package, and therefore would ignore not only the presence of the labels or stickers on the package, but additionally, would ignore the contents of such labels and stickers and the significance of the contents of such labels and stickers. However as noted above, to ignore such limitations constitutes reversible error. *In re Wilder*, 429 F.2d 447, 57 CCPA 1314, 166 USPQ 545 (CCPA 1970); *In re Glass*, 472 F.2d 1388, 176 USPQ 489 (CCPA 1973); *In re Geerdes*, 491 F.2d 1260, 180 USPQ 789 (Cust. & Pat. App. 1974); *In re Saether,* 492 F.2d 849, 181 USPQ 36 (Cust. & Pat. App. 1974); *In re Angstadt et al.*, 537 F.2d 498, 190 USPQ 214 (CCPA 1976); *Ex parte Bonutti*, 2000 WL 33347628 (Bd. Pat. App & Intrf. 2000).

Claims 1-40 are rejected under 35 U.S.C. 103(a) on White et al. 4,119,535 ("White") in view of Bottom et al. 4,597,941 ("Bottom") and Girard 4,537,697 and EPA CFR 40. This rejection is also inapplicable to the present claims.

The comments above concerning White make clear that contrary to the position stated in the Action, White does not and cannot provide the essence of the presently-claimed invention. White does not disclose any container or packaging material or label, let alone the surprising beneficial cooperation made possible between the contents of the label and the contents of the packaging material pursuant to the present invention as set forth in Claims 1-7, 11-13, 16-19 and 25. Moreover, White requires a large amount of either $NaHSO_4$ (45.6 wt%) or of $Na_2CO_3$ (27.0 wt%) in order for the White invention as summarized by the equations given on and in columns 5 and 6 to perform. Such compositions, even if packaged, would not and could not come close to the presently-claimed subject matter. To eliminate the specified amounts of $NaHSO_4$ or $Na_2CO_3$ would not only completely rewrite the White disclosure, but render the White disclosure incapable of functioning or operating in the manner described by White. An obviousness rejection, when based a modification rendering the reference inoperable for its intended purpose, is inappropriate. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). Also see *In re Fritch*, 972 F.2d 1260, 23 USPQ2d 1780 (Fed. Cir. 1992). And, any combination of references which destroys the ability of the primary reference to achieve its purpose is an improper combination. *Ex parte Rosenfeld*, 130 USPQ 113 (Bd. App. 1961), *Ex parte Westphalen*, 159 USPQ 507 (Bd. App. 1967), *Ex parte Thompson*, 184 USPQ 558 (Bd. App. 1974). Thus Bottom, Girard and the EPA statute cannot be used to rewrite White.

Moreover, none of White, Bottom, Girard, or the EPA statute disclose the surprising beneficial cooperation made possible between the contents of the label and the contents of the packaging material pursuant to the present invention such as is expressly set forth in Claims 1-7, 11-13, 16-19 and 25. In fact Girard, provides information indicating that results achievable by the

present invention would not possible. For example, the following table presents the "free chlorine" data appearing in Applicants' Table 1 and compares the percentage improvement provided by the DBDMH versus the BCDMH over the time period of the experiment.

| Time, hr | BCDMH Free $Cl_2$ | DBDMH Free $Cl_2$ | % Improvement, DBDMH v. BCDMH |
|---|---|---|---|
| 0 | 23.1 | 98.8 | 327.7% |
| 0.5 | 25.6 | 100 | 290.6% |
| 1 | 23.1 | 85.1 | 268.4% |
| 1.5 | 17.9 | 87.3 | 387.7% |
| 2 | 16.6 | 81.6 | 391.6% |
| 3 | 16.6 | 70.1 | 322.3% |
| 4 | 30.7 | 65.5 | 113.4% |
| 5 | 15.4 | 60.1 | 290.3% |
| 6 | 10.2 | 59.8 | 486.3% |

In sharp contrast, the data in Table 1 of Girard shows that the "free chlorine" from DBDMH was 80% and the "free chlorine" from BCDMH was 54%, which means that the improvement shown by Girard for DBDMH over BCDMH was only 48.2%. Thus the amount of "free chlorine" released by the quantity of DBDMH used was far greater than the amount of "free chlorine" that could be predicted to be released by that quantity of the DBDMH on the basis of the amount of "free chlorine" that was released in the water by an equimolar quantity of BCDMH. There is nothing in any of these references to suggest this, muchless make such an improvement obvious. Accordingly, Girard provides powerful evidence in support of the patentability of the present claims as amended.

Bottom and the EPA statute fail to add anything of substance to the rejection. Bottom describes no label or sticker muchless the contents of such label or sticker, let alone the surprising beneficial results made possible in use

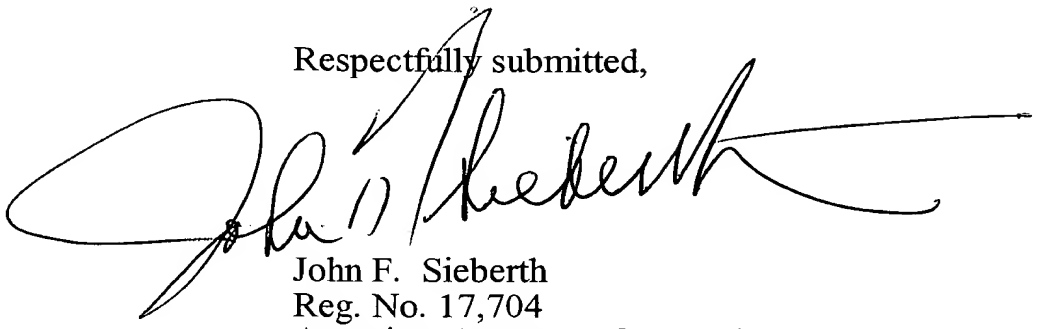
by following the content of the label pursuant to the present invention, such as illustrated by the above Table. Nor does Bottom describe a container in which at least 95 wt% of the biocidal composition in the container is a 1,3-dibromo-5,5-dialkylhydantoin with no more than 5 wt% of the biocidal composition in the container optionally or actually being one or more biocidally-inactive ingredients. Blocks 38 and 58 of Bottom lead away from any such composition. While the EPA statute may require labels with certain contents on the labels, the unprecedented results achievable by one skilled in the art by following the labels of the present packaged compositions are nowhere made obvious by anything in the statute. And as noted above, the references taken together lead away from the presently-claimed subject matter, if not destroy the ability of the primary reference, White, to function as described by White. Thus no *prima facie* case of obviousness exists as regards the present claims.

Moreover, various additional distinguishing features of the dependent claims are nowhere to be found or suggested by anything in this combination of references. This includes, for example, the compacted 1,3-dibromo-5,5-dimethylhydantoin formed from 1,3-dibromo-5,5-dimethylhydantoin having an average particle size of at least 175 microns of Claim 2; a biocidal composition contained within the packaging material that is at least 99 wt% 1,3-dibromo-5,5-dimethylhydantoin in the form of granules of Claim 5; granules, nuggets, pellets, tablets, briquettes, and pucks formed with a synthetic polyolefin-based hydrocarbon wax binder or a micronized synthetic polyfluorocarbon wax binder, or both, as in Claim 6; and the packaged combinations defined in Claims 26 and 40.

It is believed that the case is in condition for allowance. Notice to this effect would be appreciated. If, however, any matters remain in requiring further consideration, the Examiner is respectfully requested to telephone the undersigned so that such matters can be discussed, and if possible, promptly resolved.

Please continue to address all correspondence in this Application to Mr. Philip M. Pippenger at the address of record.

Respectfully submitted,



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**CERTIFICATE OF MAILING**

I hereby certify that in accordance with standard business practice, this paper (along with any referred to as being attached or enclosed) is to be deposited on the date shown below with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231.

**December 12, 2002**
Date

Marie H. Zoller
**Marie H. Zoller**

**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

1. (Amended) An article of manufacture comprising a packaging material and a biocidal composition contained within said packaging material, wherein said biocidal composition that is contained within said packaging material consists essentially of (i) at least 95 wt% of at least one 1,3-dibromo-5,5-dialkylhydantoin in which one of the alkyl groups in the 5-position is a methyl group and the other alkyl group in the 5-position contains in the range of 1 to 4 carbon atoms as the only biocidally-active ingredient(s) in said composition, and (ii) optionally, up to 5 wt% of at least one biocidally-inactive ingredient selected from a binder, a filler, an excipient, a dye or colorant, a perfume, a stabilizer, and/or a manufacturing by-product; and wherein said packaging material comprises at least (A) a label (i) suitably identifying the name of the product that is in the package, (ii) indicating that the product can be used as a biocide in the aqueous medium of at least one member of the group consisting of (1) wastewater, (2) recirculating cooling water systems, (3) once-through cooling water systems, (4) brewery pasteurizers, (5) pulp and paper mill systems, (6) air washer systems, (7) air and gas scrubber systems, and (8) decorative fountains, and (iii) providing recommended dosage rates for use of the product, and (B) at least a sticker identifying the contents contained within the packaging material as being an oxidizing agent, wherein when using the contents of the package at said dosage rates in the aqueous medium of a member of said group (a) the molar quantity of said at least one 1,3-dibromo-5,5-dialkylhydantoin introduced into the aqueous medium of said member is less than the molar quantity of N,N′-bromochloro-5,5-dimethylhydantoin that would be required to effect the same degree of microbiological control in said water, (b) the quantity of said at least one 1,3-dibromo-5,5-dialkylhydantoin introduced into the water of said member releases an amount of "free chlorine" that is greater than the amount of "free chlorine" that would be released in said water by an equimolar quantity of N,N′-bromochloro-5,5-dimethylhydantoin, and (c) the amount of "free chlorine" released by the quantity of said at least one 1,3-dibromo-5,5-dialkylhydantoin introduced into the water of said member is

greater than the amount of "free chlorine" that could be predicted to be released by that quantity of said at least one 1,3-dibromo-5,5-dialkylhydantoin on the basis of the amount of "free chlorine" that would be released in said water by an equimolar quantity of N,N'-bromochloro-5,5-dimethylhydantoin.

2. (Amended) An article of manufacture of Claim 1 wherein said biocidal composition contained within said packaging material is compacted 1,3-dibromo-5,5-dimethylhydantoin formed from 1,3-dibromo-5,5-dimethylhydantoin having an average particle size of at least 175 microns. [contains at least one biocidally-inactive ingredient, and wherein said label or another label associated with said packaging material indicates hazards associated with the handling and use of the packaged composition.]

3. (Amended) An article of manufacture of Claim 2 wherein said at least one biocidally-inactive ingredient is [comprises] a binder or a manufacturing by-product, or both.

4. An article of manufacture of Claim 1 [3] wherein said compacted 1,3-dibromo-5,5-dimethylhydantoin is in the compacted form of granules, nuggets, pellets, tablets, briquettes, or pucks. [label or another label associated with said packaging material indicates that the active ingredient of said biocidal composition contained within said packaging material is the one or more of said 1,3-dibromo-5,5-dialkylhydantoins actually contained therein.]

5. An article of manufacture of Claim 1 [4] wherein said biocidal composition that is contained within said packaging material is at least 99 wt% 1,3-dibromo-5,5-dimethylhydantoin in the form of granules. [label or another label associated with said packaging material indicates the proportion or percentage of the one or more 1,3-dibromo-5,5-dialkylhydantoins in the said biocidal composition contained in the packaged composition.]

6. An article of manufacture of Claim 2 [5] wherein said biocidal composition that is contained within said packaging material is in a compacted form selected from granules, nuggets, pellets, tablets, briquettes, and pucks, and wherein at least one biocidally-inactive ingredient that is contained in said biocidal composition is a synthetic polyolefin-based hydrocarbon wax binder or a micronized synthetic polyfluorocarbon wax binder, or both. [label or another label associated with said packaging material indicates the proportion or percentage of inactive contents in the composition contained within said packaging material.]

7. (Amended) An article of manufacture of Claim 5 wherein said label or another label associated with said packaging material include at least one of the following:

a) description of environmental hazards associated with discharge of the composition into the environment;

b) description of physical and chemical hazards, and indications of how to avoid or at least reduce such hazards in use;

c) advice on storage of the product, and on disposal of the product and containers;

d) advice concerning practical treatment and first aid to be used in the event of contact of the composition with eyes or skin, or if the composition is ingested (swallowed) or inhaled;

e) directions for use, including but not limited to dosage rates associated with specified use patterns; and

f) U.S. Environmental Protection Agency (EPA) registration number, EPA establishment number, and name and address of the registrant.

26. (Amended) An article of manufacture comprising a packaging material and a biocidal composition contained within said packaging material, wherein said biocidal composition consists essentially of a combination of (a) and (b), wherein (a) consists of (i) at least 95 wt% of at least one 1,3-dibromo-5,5-dialkylhydantoin in which one of the alkyl groups in the 5-position is a

methyl group and the other alkyl group in the 5-position contains in the range of 1 to 4 carbon atoms, and (ii) optionally, up to 5 wt% of at least one biocidally-inactive ingredient selected from a binder, a filler, an excipient, a dye or colorant, a perfume, a stabilizer, and/or a manufacturing by-product; and (b) is at least one non-fluid biocidally-active water treating agent other than, and compatible with, said at least one 1,3-dibromo-5,5-dialkylhydantoin, wherein the weight ratio of (a) to (b) is in the range of 0.1:0.4 to 99.9:0.1, and optionally (c) at least one biocidally-inactive ingredient, and wherein said packaging material comprises at least a label suitably identifying the name of the product in the package, and at least a sticker identifying the contents as being an oxidizing agent.

40. (Amended) A method of providing a microbiological control agent for use in treating water, which method comprises purveying an article of manufacture comprising a packaging material and a biocidal composition contained within said packaging material, wherein said biocidal composition consists essentially of (a) 1,3-dibromo-5,5-dimethylhydantoin; (b) at least one non-fluid biocidally-active water treating agent that is other than a 1,3-dibromo-5,5-dialkylhydantoin and that is compatible with 1,3-dibromo-5,5-dimethylhydantoin, wherein the weight ratio of (a) to (b) is in the range of 9:1 to 99.9:0.1; and (c) at least one biocidally-inactive ingredient which comprises a binder or a manufacturing by-product, or both, wherein the amount of (c) is no more than 3 wt% of the 1,3-dibromo-5,5-dimethylhydantoin within said packaging material and wherein said packaging material comprises at least a label suitably identifying the name of the product in the package, and at least a sticker identifying the contents as being an oxidizing agent.